

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/021,894	UNNO, GARRETT	
	Examiner	Art Unit	
	Brian J. Sines	1743	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the response filed 8/25/2005.
2.  The allowed claim(s) is/are 1,2 and 4-6.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

## DETAILED ACTION

### *Allowable Subject Matter*

Claims 1, 2, & 4 – 46 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the cited prior art neither teach nor fairly suggest a computer-implemented method for selectively contacting microfluidic devices and arrayed materials, the method comprising:

- (a) providing a microfluidic device handling system operably connected to at least one computer, wherein the microfluidic device handling system is capable of implementing relative movement under instruction of the computer of one or more of at least one microfluidic device having  $n$  capillary elements extending therefrom, at least one array of materials having  $x$  material sites, and at least one container;
- (b) inputting one or more initial parameters for the at least one microfluidic device and the at least one array into the at least one computer, the at least one computer comprising at least one simple logic control program for selectively contacting at least one capillary element and material at at least one selected material site disposed in or on a surface of the at least one array; and,
- (c) implementing the at least one simple logic control program to effect:
  - (i) moving the at least one microfluidic device relative to the at least one array, the at least one array relative to the at least one microfluidic device, or both, according to the one or more initial parameters, and

(ii) contacting the at least one capillary element and the material at the at least one selected material site; wherein the at least one simple logic control program optimizes a course for selectively contacting the at least one capillary element and the material at the at least one selected material site.

Regarding claim 30, the cited prior art neither teach nor fairly suggest an integrated system, comprising:

at least one computer;  
a microfluidic device handling system operably connected to the at least one computer, wherein the microfluidic device handling system is capable of implementing relative movement under instruction of the at least one computer of one or more of at least one microfluidic device having n capillary elements extending therefrom, at least one array of materials having x material sites, and at least one container;

a computer readable medium operably connected to the at least one computer that stores at least one simple logic control program for selectively contacting at least one capillary element and a material at at least one selected material site disposed in or on a surface of the at least one array or a fluid in the at least one container, the at least one simple logic control program comprising:

at least one instruction set for causing the at least one computer to receive one or more inputted initial parameters;  
at least one instruction set for causing the at least one computer to effect

movement of the at least one microfluidic device to the at least one selected material site or to the at least one container according to one or more inputted initial parameters or one or more updated parameters, to effect movement of the at least one array or the at least one container relative to the at least one microfluidic device according to one or more inputted initial parameters or one or more updated parameters, or both;

at least one instruction set for causing the at least one computer to effect contact of the at least one capillary element and the material or the fluid according to one or more inputted initial parameters or one or more updated parameters; and,

at least one instruction set for causing the at least one computer to effect deselection of the at least one selected material site following contact between the at least one capillary element and the material; wherein the at least one simple logic control program optimizes a course for selectively contacting the at least one capillary element and the material at the at least one selected material site.

Regarding claim 42, the cited prior art neither teach nor fairly suggest a computer program product comprising a computer readable medium having at least one simple logic control program stored thereon for causing a computer to selectively contact at least one capillary element of at least one microfluidic device having n capillary elements extending therefrom and one or both of material at at least one selected material site of at least one array of

materials having x material sites and fluid in at least one container, the at least one simple logic control program comprising:

at least one instruction set for causing the at least one computer to receive one or more inputted initial parameters;

at least one instruction set for causing the at least one computer to effect movement of the at least one microfluidic device to the at least one selected material site or to the at least one container according to one or more inputted initial parameters or one or more updated parameters, to effect movement of the at least one array or the at least one container relative to the at least one microfluidic device according to one or more inputted initial parameters or one or more updated parameters, or both;

at least one instruction set for causing the at least one computer to effect contact of the at least one capillary element and the material or the fluid according to one or more inputted initial parameters or one or more updated parameters; and,

at least one instruction set for causing the at least one computer to effect deselection of the at least one selected material site following contact between the at least one capillary element and the material;

wherein the at least one simple logic control program optimizes a course for selectively contacting the at least one capillary element and the material at the at least one selected material site.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brian J. Sines".